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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/499,859	02/07/2000	Mark Held	FORE -58	1830
7590	01/16/2004		EXAMINER	
Ansel M. Schwartz One Sterling Plaza 201 N. Craig Street Pittsburgh, PA 15213			MOLINARI, MICHAEL J	
			ART UNIT	PAPER NUMBER
			2665	
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Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No.	Applicant(s)
	09/499,859	HELD ET AL.
	Examiner Michael J Molinari	Art Unit 2665

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) Responsive to communication(s) filed on 01 January 2004.
- 2a) This action is **FINAL**.                    2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) Claim(s) 1-17 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) Claim(s) \_\_\_\_\_ is/are allowed.
- 6) Claim(s) 1-17 is/are rejected.
- 7) Claim(s) \_\_\_\_\_ is/are objected to.
- 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on \_\_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. §§ 119 and 120

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) All    b) Some \* c) None of:  
1. Certified copies of the priority documents have been received.  
2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 13) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.  
a) The translation of the foreign language provisional application has been received.
- 14) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                             | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____  |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)         | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ | 6) <input type="checkbox"/> Other: _____                                    |

## **DETAILED ACTION**

### ***Claim Rejections - 35 USC § 112***

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claim 1 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The claim contains the limitation "for which a user specifies ..." but never states what is specified by the user.
3. Claim 8 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The claim contains the limitation "specifying by a user, ..." but never states what is specified by the user.

### ***Claim Rejections - 35 USC § 103***

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-6 and 8-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lee et al. (U.S. Patent No. 5,446,730) in view of Digne et al. (U.S. Patent No. 5,530,695).

3. Referring to claim 1, Lee et al. disclose an apparatus for establishing circuits in an ATM network comprising: a controller for which a user (see column 1, lines 28-39) specifies every quality of service requirement of a circuit which can be changed, in what order, and by how much (see column 3, lines 58-67, column 4, lines 1-2 and 35-58, column 6, lines 64-67 and column 7, lines 1-2) which attempts to establish a circuit according to original quality of service requirements (see column 4, lines 43-46), which determines available resources of the ATM network (see column 4, lines 43-46) and which automatically relaxes the original quality of service requirements associated with a circuit for the circuit to be formed in the ATM network with the available resources of the ATM network (see column 4, lines 46-48); and a memory which stores a plurality of different quality of service requirements, said memory connected to the controller for the controller to obtain different quality of service requirements for the controller to automatically relax the original quality of service requirements with different quality of service requirements (see column 4, lines 35-41). Lee et al. differ from claim 1 in that they fail to disclose the use of a UPC associated with the circuit. However, the use of UPCs in ATM networks is well known in the art. For example, Dighe et al. teach the use of a UPC approach, which has the advantage of providing a unified and scalable solution to the issue of QoS (see Abstract). One skilled in the art would have recognized the advantage of using UPCs in an ATM network as taught by Dighe et al. Therefore, it would have been obvious to a person with ordinary skill in the art at the time of the invention to incorporate the use of UPCs in an ATM network as taught by Dighe et al. into the invention of Lee et al. to achieve the advantage of providing a unified and scalable solution to the issue of QoS.

4. Referring to claim 2, Lee et al. disclose that the controller automatically selectively relaxes the quality of service requirements by choosing a different quality of service requirement (see column 4, lines 46-48).
5. Referring to claim 3, Lee et al. disclose that the memory includes an index having the different quality of service requirements ordered in terms of priority for the controller to choose when the controller relaxes the original quality of service requirements and attempts to establish the circuit (see column 4, lines 35-41).
6. Referring to claim 4, Lee et al. differ from claim 4 in that they fail to disclose that the controller places a flag in the memory for the circuit when the circuit is established with relaxed quality of service requirements. However, the examiner takes official notice that it is conventional in the art for ATM switches to contain tables in memory containing entries for each connection supported by that switch. Such a table would include circuits with relaxed QoS requirements.
7. Referring to claim 5, Lee et al. disclose that the controller periodically reexamines the ATM network resources and attempts to establish the circuit with the original quality of service requirements in the ATM network (see column 5, lines 52-58, and see column 6, lines 64-67 and column 7, lines 1-2).
8. Referring to claim 6, Lee et al. disclose that the controller attempts to establish the circuit with the original quality of service requirements, if the original quality of service requirements of the circuit cannot be satisfied, the controller attempts to establish the circuit with the quality of service requirements in the index according to their priority until quality of service requirements

with a higher priority than the quality of service requirements that the circuit is currently established under in the network is found (see column 4, lines 35-48).

9. Referring to claim 8, Lee et al. disclose a method for establishing circuits in an ATM network comprising the steps of: specifying by a user (see column 1, lines 28-39), for every quality of service requirement of a UPC of a circuit for which there is an entity in the UPC associated with the circuit which requirements can be changed, in what order, and by how much (see column 3, lines 58-67, column 4, lines 1-2 and 35-58, column 6, lines 64-67 and column 7, lines 1-2); attempting to form a connection in an ATM network satisfying original quality of service requirements (see column 4, lines 43-36); rejecting the formation of the circuit due to resources of the ATM network not being available to meet the original quality of service requirements of the circuit; relaxing automatically the quality of service requirements of the circuit; and creating the circuit in the ATM network subject to the relaxed quality of service requirements (see column 4, lines 43-48). Lee et al. differ from claim 8 in that they fail to disclose the use of a UPC associated with the circuit. However, the use of UPCs in ATM networks is well known in the art. For example, Digne et al. teach the use of a UPC approach, which has the advantage of providing a unified and scalable solution to the issue of QoS (see Abstract). One skilled in the art would have recognized the advantage of using UPCs in an ATM network as taught by Digne et al. Therefore, it would have been obvious to a person with ordinary skill in the art at the time of the invention to incorporate the use of UPCs in an ATM network as taught by Digne et al. into the invention of Lee et al. to achieve the advantage of providing a unified and scalable solution to the issue of QoS.

1. Referring to claim 9, Lee et al. disclose that the relaxing step includes the step of relaxing automatically and selectively the original quality of service requirements by choosing different quality of service requirements than the original quality of service requirements (see column 4, lines 43-48 and note that initially Routing tries to satisfy requested QoS, but if it fails it then tries to satisfy acceptable QoS).
2. Referring to claim 16, Digue et al. disclose that the specifying step includes the step of specifying that the requirements of PCR (peak cell rate), SCR (sustainable cell rate) and MBS (maximum burst size) can be changed (see column 3, lines 39-40, column 5, lines 56-67, column 6, lines 1-42, and column 7, lines 25-53).
3. Referring to claim 17, Digue et al. disclose that the requirements of PCR, SCR, and MRS can be changed (see column 3, lines 39-40, column 5, lines 56-67, column 6, lines 1-42, and column 7, lines 25-53).
10. Claims 7 and 14-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lee et al. in view of Digue et al. as applied to claims 6 and 14 above, and further in view of Burns et al. (U.S. Patent No. 6,442,132).
11. Referring to claims 7 and 14-15, Lee et al. in view of Digue et al. differ from claims 7 and 14 in that they fail to disclose that the circuit is an SPVx circuit. However, the use of SPVCs in ATM is well known in the art. For example, Burns et al. teach the use of SPVCs, which have the advantage of being more robust and efficient than PVCs (see column 1, lines 12-39). One skilled in the art would have recognized the advantage of using SPVCs as taught by Burns et al. Therefore, it would have been obvious to a person with ordinary skill in the art at the time of the invention to incorporate the use of SPVCs as taught by Burns et al. into the invention of Lee et

al. in view of Digne et al. to achieve the advantage of using connections that are more robust and efficient than PVCs.

12. Claims 10-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lee et al. (U.S. Patent No. 5,446,730).

4. Referring to claim 10, Lee et al. disclose that the relaxing automatically and selectively step includes the step of choosing the different quality of service requirements from a plurality of different quality of service requirements (see column 4, lines 35-48 and note that the system creates multi-level preferences). Lee et al. differ from claim 10 in that they fail to disclose the use of a controller and a memory having an index. However, the Examiner takes official notice that the use of controllers and memories with indexes in ATM switches are conventional in the art. Therefore, it would have been obvious to a person with ordinary skill in the art at the time of the invention to implement the invention of Lee et al. using a controller and a memory with an index.

13. Referring to claim 11, Lee et al. disclose that, before the attempting step, there is the step of establishing the different quality of service requirements, each with a priority relative to each other and the original quality of service requirements (see column 4, lines 35-48 and note that the sets are established and then the setup uses the previously defined sets of QoS). Lee et al. differ from claim 11 in that they fail to disclose the use of an index. However, the Examiner takes official notice that the use of a memory with an index in an ATM switch is conventional in the art. Therefore, it would have been obvious to a person with ordinary skill in the art at the time of the invention to implement the invention of Lee et al. using a memory with an index.

14. Referring to claim 12, Lee et al. differ from claim 12 in that they fail to disclose that, after the recreating step, there is the step of placing a flag in the memory by the controller corresponding with the circuit that is established with relaxed quality of service requirements. However, the examiner takes official notice that it is conventional in the art for ATM switches to contain tables in memory containing entries for each connection supported by that switch. Such a table would include circuits with relaxed QoS requirements.

15. Referring to claim 13, Lee et al. disclose that, after the creating step, there are the steps of re-examining the ATM network resources and attempting to establish the circuit with the original quality of service requirements in the ATM network (see column 5, lines 52-58, column 6, lines 64-67, and column 7, lines 1-2).

16. Referring to claim 14, Lee et al. disclose that, after the attempting to establish step, there is the step of attempting to establish the circuit with the different quality of service requirements in the index according to their priority until different quality of service requirements with a higher priority than the quality of service requirements that the circuit is currently established under in the network is found (see column 4, lines 35-48).

#### ***Response to Arguments***

17. Applicant's arguments filed 1 January 2004 have been fully considered but they are not persuasive.

18. Applicant has argued that the Examiner stated that "there must be some teaching or suggestion or motivation found in the references themselves to combine the teachings of the prior art" and further argued that the Examiner ignored the law. If Applicant carefully reads the

final action he will see that the examiner stated that there must be "some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art". See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). The examiner has shown that there is a teaching found in the knowledge generally available to one of ordinary skill in the art and has, therefore, not "ignored the law" as argued by Applicant.

19. Applicant has argued that it is not proper to combine Lee et al. with Digue et al. because "the reason the Examiner submits is the basis for the combination is so broad, that anything could then be considered advantageous in some environment or circumstance". First, the examiner has stated very detailed reasons for combining the references and does not believe that the basis for combination is broad. Furthermore, whether a motivation for combining is broad or not is not the most relevant issue, but whether the motivation would have been obvious to a person with ordinary skill in the art at the time of the invention. Again, the examiner has shown that it would have been.

20. Applicant has made a number of arguments regarding combination of Lee et al. with Digue et al. Although a response to these arguments has been made in a previous office action, it will be repeated in this office action.

21. The examiner notes that the only argument against the Lee et al. reference by Applicant is that Lee et al. fail to teach the use of a UPC-based traffic control framework. Applicant has conceded that Digue et al. teach a UPC-based traffic control framework, but has contested that the UPC-based traffic control framework of Digue et al. cannot be properly combined with the method taught by Lee et al.

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22. In response to applicant's argument that there is no suggestion to combine the references, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992).

In this case, Applicant has argued that there is no teaching in Lee et al. or in Dighe et al. to combine the two references. However, the examiner believes that it is proper to combine the teaching of Lee et al. with the teaching of Dighe et al. because Lee et al. teach a method of forming connections in an ATM network in which parameters are established for each connection, on a connection-by-connection basis, and are used to establish a circuit in the ATM network. Specifically, Lee et al. teaches that these parameters can be divided into a desired set of parameters to attempt to obtain and an acceptable set of parameters that may be used when a desired connection cannot be obtained from the network. Lee et al. differs from claims 1 and 8 only in that it fails to teach the use of parameters that are from a UPC. UPCs are used in ATM networks for admission of cells to the network after a connection has been made, based on parameters that are determined for that flow. To that teaching, Dighe et al. add the teaching that flows can be characterized by specific parameters. Dighe et al. further teach that the use of UPC-based admission control is advantageous, which would therefore motivate a person skilled in the art to combine such a system with the system of Lee et al. There would be no conflict in using a call setup method as taught by Lee et al. in an ATM network that uses a UPC system for cell admission because call connection and the use of a UPC are separate features of an ATM

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network. There would furthermore be no conflict in using the parameters from the UPC system in connection setup because the network should use the same parameters for setting up a connection that it uses for policing a connection. Furthermore, the teaching of Dighe et al. to use leaky bucket in their UPC system has no bearing on whether or not the two references can be combined because the choice to use a leaky bucket algorithm (or dual leaky bucket algorithm, or sliding window algorithm, etc.) for use in the UPC system is independent of the call connection method.

23. In response to applicant's argument that Dighe et al. cannot be incorporated into Lee et al., the test for obviousness is not whether the features of a secondary reference may be bodily incorporated into the structure of the primary reference; nor is it that the claimed invention must be expressly suggested in any one or all of the references. Rather, the test is what the combined teachings of the references would have suggested to those of ordinary skill in the art. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981).

24. In response to applicant's argument that the examiner's conclusion of obviousness is based upon improper hindsight reasoning, it must be recognized that any judgment on obviousness is in a sense necessarily a reconstruction based upon hindsight reasoning. But so long as it takes into account only knowledge which was within the level of ordinary skill at the time the claimed invention was made, and does not include knowledge gleaned only from the applicant's disclosure, such a reconstruction is proper. See *In re McLaughlin*, 443 F.2d 1392, 170 USPQ 209 (CCPA 1971).

25. In response to applicant's argument that Dighe et al. is nonanalogous art, it has been held that a prior art reference must either be in the field of applicant's endeavor or, if not, then be

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reasonably pertinent to the particular problem with which the applicant was concerned, in order to be relied upon as a basis for rejection of the claimed invention. See *In re Oetiker*, 977 F.2d 1443, 24 USPQ2d 1443 (Fed. Cir. 1992). In this case, Lee et al. and Digne et al. are both drawn to methods of managing connections made in ATM networks and are, therefore, analogous.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael J Molinari whose telephone number is (703) 305-5742. The examiner can normally be reached on Monday-Friday 9am-5:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Huy Vu can be reached on (703) 308-6602. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9314.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-3900.

MJM

Michael Joseph Molinari



ALPLUS H. HSU  
PRIMARY EXAMINER